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THE PLANT DISEASE REPORTER

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UNITED STATES DEPARTMENT OF AGRICULTURE

THE PLANT DISEASE REPORTER

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THE PLANT DISEASE SURVEY

DIVISION OF MYCOLOGY AND DISEASE SURVEY

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GRAIN DISEASES IN GEORGIA IN 1937

J. H. Miller

WHEAT: Leaf rust (Puccinia rubigo-vera tritici /P. triticina/) was unusually severe in this State probably due to the mild winter. In northern Georgia about 10 percent of the leaves were infected by the middle of March, or one month earlier than usual, and by May 10 all leaves were destroyed on the earlier maturing varieties and about 80 percent on the late ones. There was a total loss in some fields in Union County and some fields in counties adjoining Clarke, but in Bibb County fields were found that were affected only slightly. The average loss for the State was about 30 percent.

The varieties on the Agronomy Plots at Athens showed some variation in susceptibility. Wheatland, Cherokee, Leap's Prolific, Mammoth Red, Fultz, Stoner, Dietz Mediterranean, were the most resistant with an average loss of about 15 percent, while Purple Straw, Redheart, C.I.5977, Alabama Bluestem, Georgia Red, Velvet Chaff, Georgia Rust Proof, Orlander, Gasta, and Common Wheat were very susceptible with losses varying from 30 to 40 percent for the last.

Stem rust (Puccinia graminis f.). A trace of this rust was found on the late varieties on the Agronomy Plots June 1. Fulcaster wheat in Union County had the yield reduced at least 50 percent and some fields were so badly rusted there was no yield.

Loose smut (Ustilago tritici) was found in all fields visited in north Georgia, and the loss varied from about 1 to 3 percent, which is normal.

Stinking smut (Tilletia tritici) was found in two locations, on the Agronomy Plots in the Georgia Red variety and near Swainsboro. About 30 percent of smut balls were found in each case.

Scab (Gibberella saubinetii) caused a loss of about 5 percent of the heads in a Cherokee Wheat field in Clarke County, and was sent in from near Vienna.

Grain nematode (Tylenchus tritici) was again seen in Hart, Franklin, and Pickens Counties in old locations and a new location was found in Stephens County.

OATS: Crown rust (Puccinia coronata) produced an unusually high loss this year on some varieties and was worse in south Georgia than in the northern part of the State. It was first noticed in this section

towards the last of December. One field of Coker's Smut Proof in Oconee County was heavily infected then. When harvested the loss in this field was about 80 percent. On the Agronomy Plots Appler, Bancroft, Texas Rustproof, Nortex, and Coker 33-47 were the most resistant, and Custis, Coker 32-1, Lee, Burt, Winter Fulghum, Norton were very susceptible in the order named. The loss for the State was about 20 percent with some fields in south Georgia being a total loss.

Loose smut (Ustilago avenae) was found in all fields inspected with a loss of from 1 to 2 percent.

BARLEY: Leaf rust (Puccinia anomala) was found on Tennessee Hooded, Hybrid Hooded, Greece, Mammoth, Nakano, and Argentina varieties with about 1 percent loss at Athens. This rust is extremely rare here.

Stem rust (Puccinia graminis f.). A trace was found on the Argentina variety and this is also a rare occurrence.

RYE: Leaf rust (Puccinia dispersa) was heavier than usual. Abruzzi and South Georgia rye were susceptible and Italian and French rye most resistant. The loss was about 10 percent in these varieties at Athens. (University of Georgia, College of Agriculture).

INCIDENCE OF EAR ROTS IN THE 1936 CORN CROP

Neil E. Stevens

Continuing the surveys of total damage in corn begun several years ago, there is here presented a summary of the information for the 1936 crop. The information on the incidence of corn ear rots here presented was made available through the courtesy of the Grain Division, Bureau of

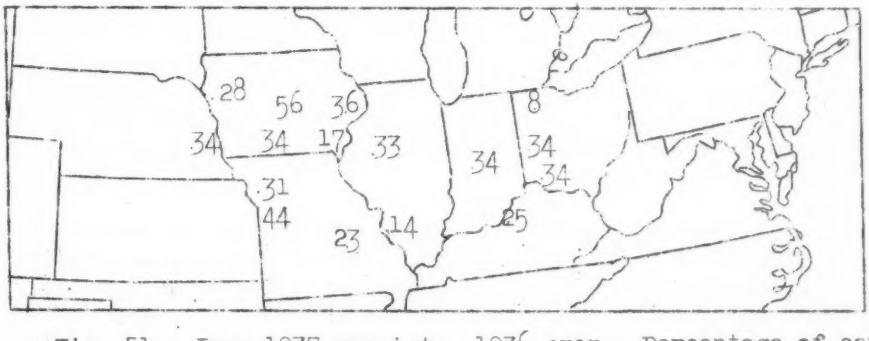

Fig. 51. June 1937 receipts, 1936 crop. Percentage of cars of shelled corn showing 5 percent or over total damage.

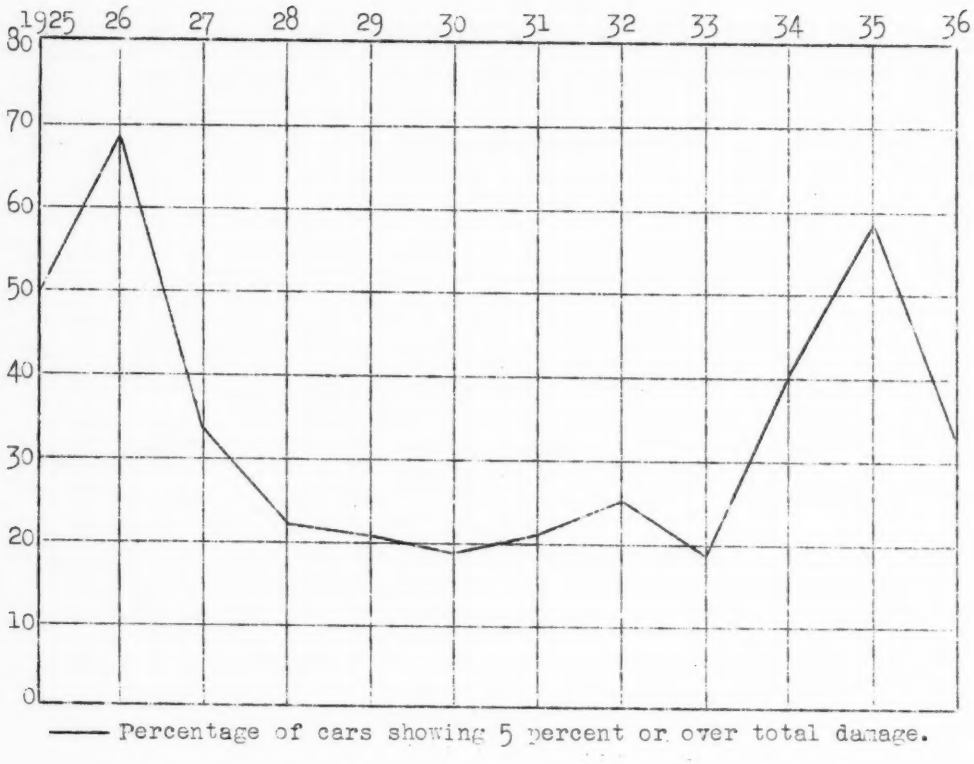

Fig. 52. Incidence of corn ear rots in the various crops as indicated by the percentage of cars of shelled corn received at terminals listed in the text, showing 5 percent or over total damage in June of the following year.

Agricultural Economics, U. S. Department of Agriculture, and is based on results of licensed inspections of shelled corn receipts at various terminals during June, 1937. The method of assembling information was that previously used and explained in earlier reports (P.D.R. 19:71-93 and 20:63-71, 316-320), as were the reasons for considering total damage in June receipts a fairly reliable index of losses due to disease in the corn as it reaches terminal markets.

The map, Fig. 51, gives the percentage of cars of shelled corn showing 5 percent or over total damage received during June 1937 at Toledo, Springfield, Cincinnati, Ohio; Louisville, Kentucky; Indianapolis, Indiana; Peoria, East St. Louis, Illinois; Cedar Rapids, Clinton, Des Moines, Keokuk, Sioux City, Iowa; St. Louis, St. Joseph, Kansas City, Missouri; and Omaha, Nebraska. The number of terminals represented, that is, those

that received at least fifty cars of shelled corn from country points, is smaller than in other recent years. Comparison of the map for 1936 with that for 1935 shows a decrease in the percentage of cars having 5 percent or more total damage at every terminal reporting. As shown in Fig. 52, the average for all the terminals listed was only 32 percent, the lowest since 1933. (University of Illinois).

TOBACCO FIELD DISEASES IN FLORIDA, 1937

Randall R. Kincaid

Several diseases were observed in the field during the season, but none were of major importance except root knot (Heterodera marioni), which is present in nearly all crops of tobacco every year. Although no estimate of the actual loss incurred by root knot can be made, it was perhaps greater in 1937 than usual.

Downy mildew (Peronospora tabacina) caused considerable reduction in field stands, averaging as high as 35 percent in some counties, and perhaps 10 percent for the State, according to information furnished by county agents. This reduction was largely offset by resetting, and no loss from spotting of harvested leaves was reported this season.

Blackshank (Phytophthora parasitica var. nicotianae) is believed to have been less serious in the cigar-wrapper area than usual. Frenching or polyphylly was observed on about one-tenth acre of cigar-wrapper tobacco; the upper third of the leaves on the affected plants were severely affected and entirely worthless. Brown spot (Alternaria longipes) was very severe in one shade, in which root knot was also severe.

W. B. Tisdale reports the occurrence of Sclerotium rolfsii in a field of cigarette tobacco near Hawthorne in Alachua County. The loss was estimated by the grower at perhaps 15 to 20 percent.

Other diseases observed were mosaic, Phyllosticta leaf spot, and frog eye (Cercospora nicotianae). Drowning (wet weather injury) was observed in several fields. Lightning injury was observed once. (North Florida Experiment Station, Quincy, Florida).

PHYLLOSTICTA LEAF SPOT OF WALNUTS IN OREGON

P. W. Miller

A leaf spot disease due to Phyllosticta juglandis(DC) Sacc. was found recently, near Eugene, Oregon, on leaves of seedling Persian (English) walnuts. The disease was not severe enough, however, to cause any appreciable

premature defoliation. As far as can be ascertained from a perusal of available literature, this particular leaf spot has not been reported heretofore on Juglans regia in the Pacific Northwest. (Division of Fruit & Vegetable Crops and Diseases, Sept. 29).

DUTCH ELM DISEASE ERADICATION

(From reports of Bureau of Entomology and Plant Quarantine covering weeks ending August 28 to October 9 inclusive).

During the period 1354 trees were confirmed, of which 29 were in Connecticut, 1057 in New Jersey, 265 in New York, 1 in Indianapolis, and 2 in Wileys Ford, West Virginia. Both of the trees in Wileys Ford were near previous confirmations.

Comparing the periods from May 30 to October 3, 1936, and May 29 to October 2, 1937, the number of diseased trees found this season was 1,824 less than found during the 1936 season. The numbers for each State are as follows:

	1936	1937	Increase or Decrease
Connecticut	96	111	15 (plus)
New Jersey	5,504	4,215	1,289 (minus)
New York	1,699	1,136	563 (minus)
Outside States	22	35	13 (plus)
	7,321	5,497	1,824 (minus)

SEPTEMBER WEATHER

Figure 53 shows that the month of September was somewhat cooler than normal in practically all parts of the country east of the Mississippi Valley, particularly in the Ohio Valley and some middle Atlantic sections, where the month was from 2° to 3° cooler than usual. It was slightly warmer in the Florida Peninsula and quite generally from the Mississippi Valley westward, especially in the Great Basin and adjoining districts where the month averaged 4° to 5° warmer than normal. It was also warm in the central Great Plains, with the plus departures ranging from 3° to 4°, while the averages were also high in northwestern Texas. (Weekly Weather and Crop Bulletin, week ending October 5).

Figure 54 shows the percentage of normal precipitation by States for September 1937. It will be seen that September rainfall varied widely in many parts of the country; Alabama reported 123 percent of the usual rainfall, while Georgia had only 69 percent. The month was relatively dry

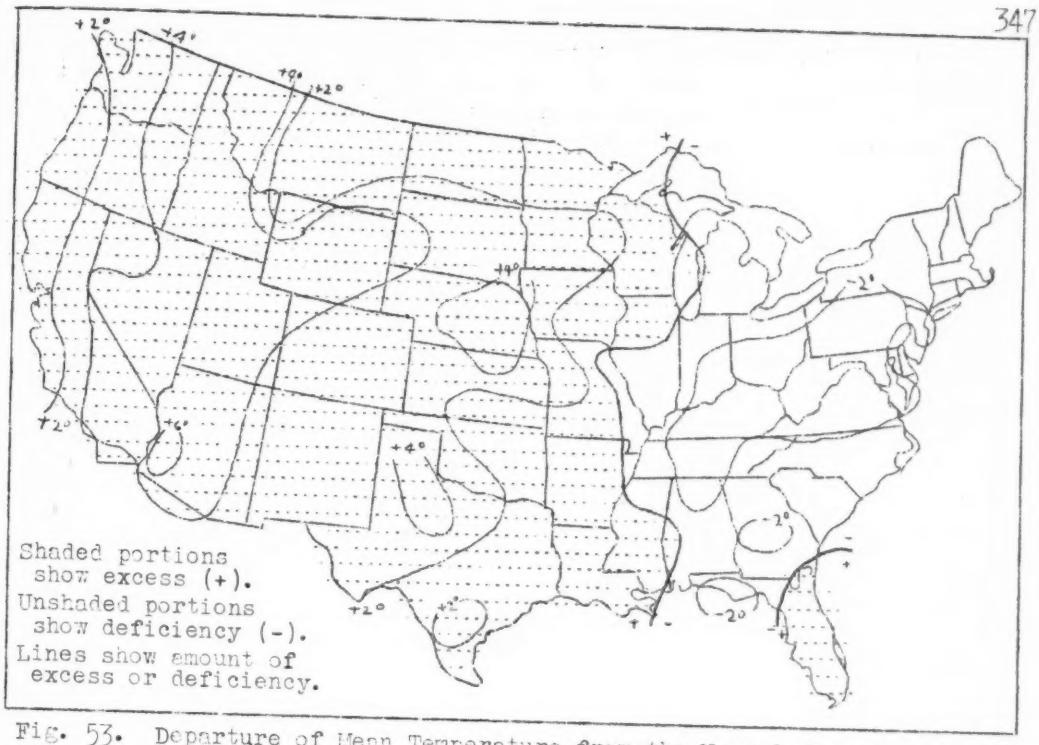

Fig. 53. Departure of Mean Temperature from the Normal for September 1937.

in the Middle Atlantic States and the Southeast, excluding Florida. In these areas the monthly percentages of normal ranged from 54 percent to around 75 percent. The month's precipitation was also scanty in the central and lower Missouri Valley and the central Mississippi Valley, with the monthly amounts ranging from 39 percent in Iowa to 72 percent in Nebraska. The Pacific Coast States were also deficient in rainfall, California reporting only 7 percent of the usual amount, and only 74 percent in Washington. The month was somewhat wetter than normal in scattered areas, notably in the Southwest, Montana, Michigan, and the States of Oklahoma, Arkansas, Alabama, and Florida; only nine States reported above-normal rainfall for the month. (Weekly Weather and Crop Bulletin, week ending October 12).

ACCUMULATED PRECIPITATION

Figure 55 shows the percentage of normal precipitation by States for the period, March--August 1937. During this warm season precipitation was normal or above in the Atlantic Coast States, and the Southeast. Throughout these areas the percentages ranged from exactly normal to 21

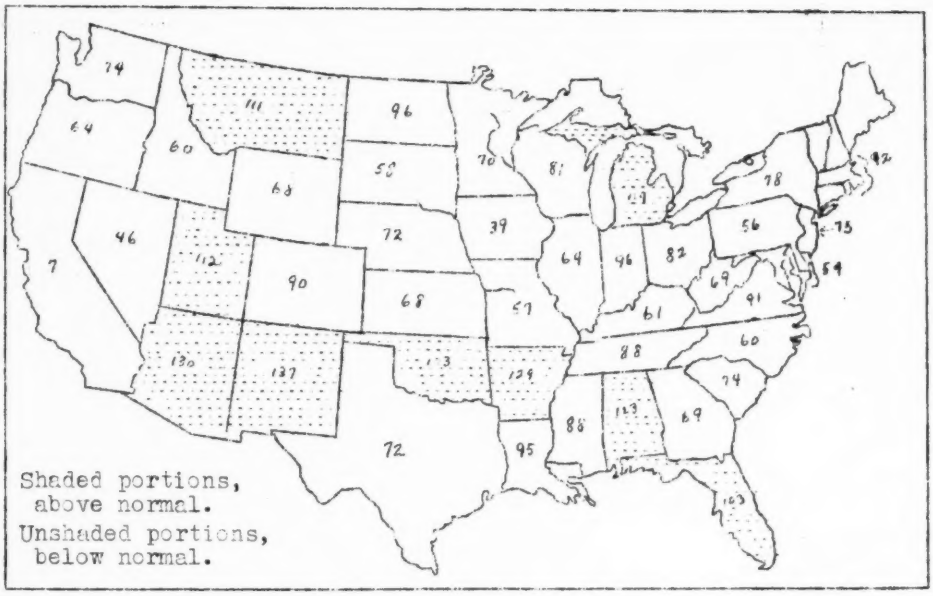

Fig. 54. Percentage of Normal Precipitation, by States, for September 1937.

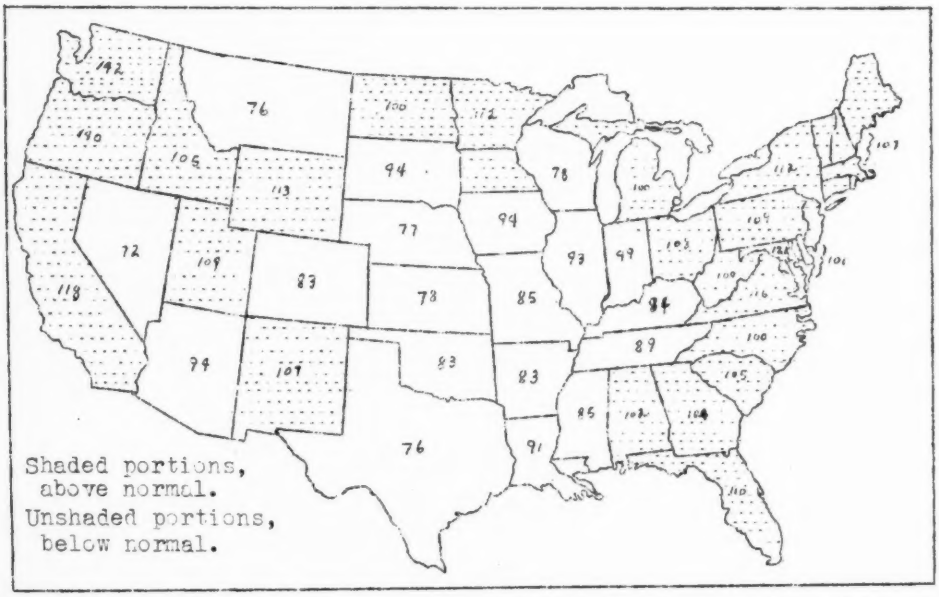

Fig. 55. Percentage of Normal Precipitation, by States, for March-August, Inclusive 1937.

percent above. Precipitation was also in excess in the eastern Ohio Valley, central Lake region, northern Great Plains, and in parts of the West. It was quite dry for the season in the central and southern Great Plains where the amounts ranged from 23 percent to 17 percent below the average. Relatively dry areas were noted in the southern Ohio Valley, the western Lake region, and the western Great Basin. (Weekly Weather and Crop Bulletin, week ending Sept. 21).